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An Assessment of School-to-Work Transition

in a

Vocational and Technical High School in Ankara, Turkey

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An Assessment of School-to-Work Transition in a Vocational and Technical High School

ABSTRACT: The school-to-work transition process of a vocational-technical school from the perspectives of graduates and employers were assessed in Ankara, Turkey. Data were collected through interviews with the school's graduates and their employers. Results showed that in students' vocational choice, future employment anxiety was more influential than their ability and interest. Graduates primarily preferred to attend higher education rather than to start to work due to poor working conditions in the related labor market. Overall 60% of them were not in the field for which they were trained; however, there are considerable differences with respect to occupational branches. Such occupational branches as lathe, metal-works, and furniture and decoration are no longer attractive for students while some electronics and computer related branches are continuing to attract students. It was concluded that secondary schooling for vocational education should be reconsidered. If training institutions engage in research activities in the labor market it can be very helpful for establishing a more responsive education and training system.

Vocational and Technical Education (VTE) has a long history. It is not an invention of modern industrialized societies. Especially over the past two decades, an enormous amount of investment in the development of VTE systems has been made by individual nations and by the major international donor agencies for economic, educational, and social development. However, there is now considerable dissatisfaction with the return on this investment and the problem is not restricted to developing countries (Gray, 1993). The recurrent costs for technical schools range from 2 to 5 times higher than the costs of general academic schools (Hinchliffe, 1993; Lewin, 1993; MEB, 1991) depending on the occupational fields being offered by the school. However, if the graduates work in fields related to their training, technical schools are more cost-effective than academic schools (Lewin, 1993; Psacharopuolos& Patrinos, 1993).

A generally recognized cardinal aim of education in any organized society has been to prepare each new generation for a productive working life (Coombs, 1985). Overall, the purpose of VTE is not really different from the purpose of general education except the curriculum content and the way it prepares individuals. In short, for both secondary and tertiary levels, the main objective of VTE is to provide the economy with skilled manpower (Oxtoby, 1993; Lewin, 1993; Psacharopoulos & Patrinos, 1993; Gray, 1993). Inherent in this purpose is the fact that a close link between an effective system of VTE and a successful economy, while very difficult to prove conclusively, would seem to be indisputable (Cantor, 1991).

Psacharopoulos (1991) emphasized several concerns intending to establish a match between education and work. These are (1) to provide a school curriculum that is relevant to the world of work; (2) to improve graduate unemployment statistics; (3) to stop the one-way street from school to the university; (4) to provide the necessary skills needed by the economy. He also concluded that a close match between education and work is a utopia. According to Godwin (1990), on the other hand, there are currently high expectations of the contribution that technical education in schools is expected to make not only to manpower supply, but also to the severe unemployment and underemployment problems that exist in many countries. Although investing in vocationally oriented education may not always directly lead to economic growth, it is widely regarded as having a key role to play in easing the transition from school-to-work and enabling young people to acquire employment- related skills (Oxtoby, 1993).

In the current literature (e.g., Coombs, 1985), technological change has been counted as one of the obstacles for VTE. Because of the rapid technological and economic changes, it is not

merely enough to provide pre-employment education to the young. Whatever specific occupational skills they may be taught in their teenage years are likely to become obsolete, or at least require substantial supplementing, when the young learners enter the world of work. Not only do specific jobs and the nature of work itself keep changing, but also, more than ever before, people are changing jobs and this is true both in industrialized and less developed countries (Coombs, 1985). In the contemporary world, technology and science develop faster than the knowledge that schools can possibly transmit; television, books, and computer bring more recent knowledge to the child than he or she would find in textbooks (Khoi, 1985). All these factors force the policy makers to search for an effective system of VTE that can satisfy parties, employee and employers.

Numerous promising efforts are underway in the United States to improve the transition from secondary school to the work place (PRP, 1993). Although there are some comprehensive schools, VTE in the USA has been mainly a post secondary provision. There is also a recent movement under discussion, called "education through occupations" or "new vocationalism," that emphasizes the importance of academic-vocational integration, the connection between school and work-based learning, and the use of a broader base for learning occupational skills by involving career clusters. Grubb (1997) describes the new system as having four practices: (1) teaching general occupational competencies, (2) integrating academic and vocational content, (3) developing new institutional structures, and (4) adopting other elements of school-to-work programs. Mainly, the new movement proposes a High School program that is carefully structured to provide opportunities for career exploration, not a job-specific training at the secondary level. It postpones specific job preparation to the post-secondary years.

In summary, in order to understand if a particular training is relevant to the world of work, we need to assess: (1) students' ability and interest, (2) curriculum relevance in terms of content, teaching materials, teacher training, and (3) employment conditions. This study addresses the student interest, perceived content relevance and employment conditions.

In any country, VTE is generally located in one or more of these three distinct institutions: in formal school settings, in post school vocational training institutions, and in enterprises (King, 1993). In Turkey, for example, all of these institutions exist for vocational purposes. Occupational program areas offered by vocational schools in Turkey include agriculture, home economics, tourism and commerce, health, security, and industrial technical education. This research deals with only the last one, industrial technical education at the secondary level.

Purpose and significance: The purpose of this research is to evaluate the effectiveness of VTE and its labor market connectivity by examining the students' transition from school-to-work. In Turkey, however, there is not any reliable source answering even this simple question: How many of the VTE graduates are working in their field of study (CORD, 1994)? As Lauglo (1992) pointed out, there is certainly a need for better monitoring of the labor market, in order to gear training more quickly to changes in effective market demand. Similarly, Hinchliffe (1993) reported that in a short period of time it is possible to gain a reasonable impression of the extent to which an effective demand exists for a particular type of labor and the possibilities of, and constraints on, their employment through detailed interviews with employers. To know more about the opinions of employers, employees, and unemployed that have a VTE degree would help us evaluate the vocational technical curricula of the school. This might also help us make

some predictions about the general status of VTE in Turkey, since a fixed curriculum with respect to occupational branches is used in all of the same type of schools in Turkey.

Findings of this study will improve the relationship between the school and industry, that is, the linkages between training providers and their clients in business and industry. The end result, hopefully, would be better insight into the question of how to improve the vocational-technical schooling, and employable skills of students preparing for an ever-changing technological world.

Some studies in this area (e.g., Aksoy, 1995; Erbesler, 1987) have focused on eliciting information in the labor market by narrowing the population to industrial sector rather than attempting to discuss individual schools and programs. Therefore, they could not cover all of the VTE graduates either working out of industrial sector, studying in a university, or unemployed. In this research, a case study design was implemented in order to specifically examine the relevance of a vocational-technical degree in obtaining a job from the perspectives of both employers and VTE graduates in Ankara provice, in Turkey. The relevance of the curriculum as to the realities of the industry was also questioned.

Statement of the Problem: The main problem was stated as: "*Is there any relation between the expectations of students, the vocational education, and the specialties of jobs that are currently being performed by the workers who graduated from Balgat Industrial-Vocational and Technical High School in Ankara-Turkey from the perspectives of graduates and of employers in different sectors of industry*". The following sub-questions guided the study:

1. Why did graduates choose an industrial vocational school and what were the factors that affected this choice?
2. How did the graduates evaluate their school years in general?
3. What kind of experiences have the graduates had following graduation?
4. What were the opinions and suggestions of employers about VTE?

Methods and Design of the Study

In this study, a mixed form qualitative design (Patton, 1987) was utilized. That is, the data were gathered through interviews in qualitative form. Both statistical and content analyses were applied to analyze the data.

A case study was used, because one of the functions of case studies is to suggest explanatory clues for empirical generalizations derived by quantitative techniques (Peshkin, 1993). Another valuable outcome that may arise from a qualitative research is problem finding, a type of insight that may result from interpretation of qualitative results. In addition, the practical reason that led the researchers to choose interview technique was the very low return rate of a survey conducted by the school administration a year before. Of the 485 questionnaire, only 25 of them could be used in the analysis. Interview might work better.

Two samples were drawn for the case study. One sample was from the school's 1990-1994 graduates and the second was from their employers. Data were collected through face-to-face interviewing of 126 graduates and 18 employers. They were interviewed in accordance with pre-determined concerns such as the justifications of graduates for choosing industrial vocational high school, and work experiences of graduates. Current status of graduates at the interview date, unemployment period of graduates, having job changes, the procedures used to obtain a job, the evaluations of graduates about the school years, and the evaluations of employers about the

recruitment and VTE in general were the other pre-determined concerns included in the interview protocols as open-ended questions. For example graduates were asked:

"How did you find a job?
How long had you been unemployed after graduation?
Have you ever changed your job? Why?"

Typical questions asked to employers included:

" Are there any differences among VTE graduates with respect to their skills and knowledge?
What are your priorities in recruitment?
What is your opinion about VTE?"

Unemployed graduates were interviewed at the school (i.e., Balgat Technical and Industrial Vocational High School) in a quiet place while employed graduate interviews were conducted in their work places. Responses were note taken by the researcher. The shortest interview took 30 minutes and the longest one ran about 90 minutes. Interviews were done between the dates of January 2, and February 20, 1995.

Data were analyzed in several steps. First, an analysis tool containing five dimensions was produced regarding the pre-determined sub-questions. The categories were named as "entering school", " the school years", "after graduation", "suggestions of graduates", and "employer opinions." Interview data from 126 graduates and 18 employers were organized by classifying responses under these categories. Then, each interviewee's responses were read, and some main idea clauses were derived. In this way, repeated opinions, thoughts, suggestions, and life experiences of graduates were determined. Thematic similarities and differences were identified under each category. Finally, frequencies and percentages were drawn from the data. Some direct quotes from the subjects took place in the results as well.

The Turkish Vocational-Technical Education System and the School

In Turkey, education is administered by the central organization in Ankara, with each of the 74 provinces maintaining an education directorate, which reports officially through the provincial governors to the Ministry. As a part of the centralized system, VTE is delivered in three distinct institutions: vocational courses, apprenticeship centers, and vocational-technical schools (excluding higher education). Vocational courses are for adults whether employed or unemployed. Apprenticeship centers are similar to vocational schools. They serve theoretical vocational and general cultural education to young who are working anywhere and who have completed at least a five-year primary school. Apprentices are educated with regard to their jobs for one day a week in the center, other days they go to their work places to work and to practice.

Entrance to the secondary vocational technical schools is based on graduation from an eight-year program of basic education. The duration in VTE schools is three or four years. Students are admitted to these schools (except Technical High School) based on a nation-wide entrance examination which measures students' general scholastic ability. There are mainly four types of secondary vocational schools in Turkey:

1. *Industrial Vocational High School (IVHS)*: It provides students with a general education, substantially less than that of a general high school, plus vocational education which consists of both theory and practice related to an occupation. Students at grade 10 (it is up to local authority) and 11 go to factories or work places for three days a week to do industry practice. The other two

days, they go to school to get theoretical education. These schools provide students with vocational education in fifty-five different occupations.

2. *Technical High School (THS)*: The first year of these schools is in industrial vocational high school and the total duration is four years. Students can attend to this school after the ninth grade of IVHS, if they showed a certain degree of success in such courses as technical drawing, math, science, and language. In these schools students are served both general academic education that is parallel to the program in general high schools and vocational education in one of 22 different occupations.

3. *Anatolian Technical High School*: These are similar to technical high schools except for additional foreign language preparation (generally English) and student admission. Therefore the duration in these schools is a total of 5 years. But students can leave this school after the eleventh grade (preparation year is non-graded) by receiving a diploma of *Anatolian Vocational High School*.

4. *Anatolian Vocational High School*: In reality, there is not such a school. However, if the students want to leave Anatolian Technical High School after the eleventh grade, they can get a diploma of Anatolian Vocational High School, which is considered equivalent to the IVHS diploma.

The School: As is the case for other vocational schools, Balgat Technical and Vocational High School is also located in a poor socio-economic area. The school has all four kinds of high schools as previously mentioned. But only two of them, industrial vocational high school and technical high school (described in first and second items above) were included in the case since the other two have no graduates yet. Balgat Technical High School is one of 210 technical high schools, and Balgat Industrial Vocational High School is one of 449 industrial vocational high schools in Turkey.

Parallel to the general purpose of VTE in Turkey, Balgat Industrial Vocational High School was established for the purpose of supplying both local and national industry/business with the middle level technician. It also aims at giving an educational opportunity to young people who are at the age of secondary education to enable them to acquire some employable skills. The school was established in the 1979-80 academic year with three departments: electricity, metal works, and lathe (*tesviye*). The development and student enrollments of other departments are shown in Appendix A, table 4 (see Appendix B, figure 1 for a graphical illustration).

It can be observed from the table that each year the total number of students has increased slightly. In the 1987-88 academic year, by the legislation of the Apprenticeship and Vocational Education Act of 3308, tenth and eleventh grade students have been sent to enterprises for the purpose of *learning in production*. This practice enabled additional student capacity in the school. Therefore, in this period, student enrollment had risen more rapidly. This increase was especially significant in electricity and electronics. In other departments, on the other hand, the number of students decreased since the student demand was low. In the 1992-93 academic year, learning in production for tenth grade was terminated, therefore, the total student enrollment went down. While this decrease was significant in electricity and electronics there was no or little difference in other departments, since these departments had capacity for additional students.

It is also worth noting that the student enrollment in all of the Technical High School departments decreased one year after the Anatolian Technical High School was opened, since

successful students preferred to attend this school. Therefore, Technical High School could not get enough students who showed certain degree of success in four core subjects, namely math, science, language, and technical drawing in the ninth grade of IVHS.

Balgat Technical and Vocational High School was chosen as a case for a number of reasons. First, it has been taken into an improvement project financed by the World Bank since the 1986-87 school year. Therefore, it is better than any other technical school in Ankara province in terms of technology. Second, it was the most familiar school to the researchers, since one of the researchers had been working in that school for nine years. Lastly, in terms of scholastic ability, there are no considerable differences between the mean score of Balgat Technical-Vocational High School students and the mean scores of other similar schools in Ankara province with respect to the University Entrance Examination results (OSYM, 1992-94). Higher education admission in Turkey is based on a centrally administered examination, which is held once a year nation-wide. Students from different types of high schools (public, private, vocational, technical etc.) take this examination every year in order to be accepted by a university.

Results

According to the answers obtained to the previously stated sub-questions, the results of the study were summarized in five main categories as follows: entering school, school years, after graduation, suggestions of graduates, and employer opinions.

Entering School: As shown in table 1, the primary factor(s) that affected the graduates' decision to attend a vocational-technical school was largely family and relatives' influences. Parents lead their children to attend a vocational school. This effect was most stated by the students that graduated from the following departments: Lathe, Micro-technical, Furniture and Decoration, and Metal Works. There were fewer graduates who stated that they chose the occupational branch in which they were really interested.

Table 1
The Factors That Affected the Students' Choice of Vocational School

	FACTORS	%
1	Family and relatives (friends and past graduates added)	60.3
2	Student's own decision	34.1
3	Middle school teachers	5.6
	TOTAL	100

In speaking about why they chose an industrial vocational school, the graduates expressed several reasons at the same time. Therefore, accurate percentages could not be found. The most repeated reasons are listed below from the highest to lowest priority:

1. For fear of failing to pass the University Entrance Examination,
2. The desire to find a job easily after graduation,
3. Technical school graduates are better paid in the public sector,
4. Depending on the three reasons stated above, the desire to be a high school graduate and to acquire the skills of an occupation at the same time,
5. Being interested in the occupation.

6. Thinking that the school was good, since it has an entrance examination, and
7. Geographical proximity to the school.

It is evident that the graduates decided to choose an industrial vocational school due mainly to the economical reasons, such as the fear of unemployment. Such a reason is parallel to the written purpose of the school. However, there is little effect of their ability and interests. Another important factor influencing their choice was the belief that they could find a job easily if they graduated from a vocational school. There are also some graduates who chose the school since it was a kind of high school.

School Years: Although graduates found the vocational subjects inadequate, they used most of the skills and knowledge when they were employed in their field of technical education. As one graduate stated:

> *"...Only after graduation, an VHS graduate is not competent enough to perform a job accurately, although he has lots of knowledge and skills of an occupation... Most of the skills and knowledge are acquired in the work place"* (branch: electricity)

Almost all of the graduates interviewed (112 out of 126) claimed that academic subjects were necessary. Graduates also evaluated the academic subjects satisfactory for work-life, but inadequate for success in the University Entrance Examinations. Therefore, graduates planning further academic studies found these subjects necessary but insufficient in quality and quantity.

> *"In vocational school curriculum, academic subjects, especially math and science, are less than in academic schools... Also, these subjects are not given enough importance. Therefore, we have less chance than an academic school graduate in the UEE"* (branch: Lathe).

Moreover, many graduates claimed that they were not sure whether to give the priority to the vocational or academic courses when they were in the school. According to them, some of the students gave priority to the vocational courses while others to the academic courses in the same class. They asserted that this affected learning conditions negatively. Most of the graduates also thought that their chance of success in the University Entrance Examination decreased substantially because of being educated in a vocational school. Academic subjects being taught in vocational schools are very limited compared to those in regular high schools.

There are some complaints about the enterprises, especially the small ones, where students go for industry practice. Most of the graduates stated that the factories that they went to practice did not give any importance to education, and they viewed the students as workers not as learners. Table 2 shows the frequency of students' complaints about learning in production:

Table 2

The Frequency of Students' Complaints about Industry Practice

	PROBLEM	Frequency
1	Students are viewed as workers not as learners	23
2	Coordinator teachers do not sufficiently check the firms	18
3	Enterprises do not have enough training personnel	16
4	Activities in enterprises do not cover all of the necessary skills	15
5	Follow-up documents are not suitable	8
	TOTAL	80

After Graduation: Almost all of the graduates interviewed (122 out of 126) have taken the University Entrance Examination at least once. All of the unemployed and some of the employed graduates (see table 4) were also in concurrent efforts to prepare for the University Entrance Examination by studying at home or taking some private courses. In sum, most graduates tended primarily to attend a university.

A great majority of the graduates (91%) have had some work experiences after graduation. The current status of graduates at the interview date were as follows: just working 77.1%, both working and studying at the same time 1.6%, just studying 7.1%, and unemployed 14.2%. They preferred working if they were not successful in the University Entrance Examination. In addition, there were many graduates who were trying to attend a university after having various job experiences. They stated that they left their jobs since they were low status jobs in terms of salary and working conditions.

As shown in table 3, fifty out of 126 graduates interviewed (39.7%) rated their jobs as related to their field of education (see Appendix, figure 2 for a graphical illustration). By adding this percentage to the percentage of graduates attending higher education related to their previous education (3.2%), the total percentage of graduates remaining in related fields reaches 42.9%. In other words, almost 60% of the graduates do not use the skills and knowledge acquired during 3 to 4 years of school education in any way. On the other hand, the percentage of graduates employed in their field of study showed considerable differences with respect to vocational branches. For example, the percentage for Lathe department is 15% whereas for Industrial Electronics, it is 83%. (See Appendix B, figure 2, for a different graphical illustration).

Table 3
The Number and Current Status of Interviewed Graduates

SCHOOL	DEPARTMENT	number of interviewed graduates	un-employed	employed in un-related field	employed in related field	% of staying at related field	Studying at related programs	studying at unrelated programs
IVHS	Electricity	20	5	6	8	%45	1	-
	Electronics	20	2	2	14	%70	-	2
	Metal Work	15	2	7	6	%40	-	-
	Furniture	15	2	9	4	%26	-	-
	Lathe	20	3	13	2	%15	1	1
THS	Computer	12	3	3	5	%50	1	-
	Ind. Electronics	12	-	1	8	%83	1	2
	Micro-technical	12	1	6	3	%33	1	1
	TOTAL	126	18	47	50		4	7
%		%100	%14.3	%37.3	%39.7	%42	%3.2	%5.6

The number of student enrollment with respect to departments (see table 4) does not go parallel with what is happening in the labor market (see table 3). For instance, although Industrial Electronics department has a good reputation in the labor market, the number of student enrollment goes down. Three of the IVHS departments, Lathe, Metal Works, Furniture and Decoration, have a very low rate of job placement, however, their student enrollment goes up. Since the schools in Turkey have been administered centrally by the Ministry of Education, the ministry makes major decisions such as recruitment, student enrollment.

Almost half of the interviewed graduates had experienced one to fifty weeks of unemployment. 11% of them found their first jobs after more than 50 weeks of unemployment. Approximately half of the graduates changed their jobs at least once, and 14% of the graduates have changed jobs more than 4 times. A graduate quoted:

> *"In the first four years after graduation, I changed jobs eight times. They were very heavy works. I put up with low pay and bad working conditions. When I was working in building construction, I had a serious work accident ... I thought to change my occupational field so many times. Now, I regret being educated in an industrial vocational school"* (branch: metal works).

The reasons for making job changes and for unemployment, by percentages, are as follows: bad working conditions and low pay 42%, lack of social security 23%, bankruptcy or turnover 10%, preferring part-time works to attend to a course for the University Entrance Examination 9%, disagreement with boss or other superiors 9%, and joining the army 7%.

In finding a job, the following procedures were used by the graduates: family and relatives 56%, industry practice 14%, newspaper and work advertisements 11%, their own works 7%, school teachers 5%, coincidence 4%, and reference from previous employer 3%.

While one of the researchers has been working in the school for 9 years, he met with many graduates performing jobs, which have nothing to do with their technical education. These were such jobs as driver, police officer, military officer, clerk, waiter etc. Similarly, the distribution of 47 graduates (see table 3) working unrelated to their field of education with regard to jobs they were performing at the interview date were as follows: military officer 9, waiter 9, clerical jobs 8, police officer 5, driver 5, shop assistant 5, salesman 4, and shoe repairman 2.

Suggestions of Graduates: To make the VTE better, the suggestions of graduates were concentrated on entering school and the school process. However, there were also suggestions to improve the labor market conditions. As one graduate put it:

> *"Of course, the school could be more effective ... The conditions of work places should be made better rather than that of school ... Good worker for good jobs can grow in anywhere"* (branch: lathe).

In other words, they said that the student selection process should be made more functional, and the school process, like courses, workshops, and teaching materials should be more effective, but at the same time, the working conditions in enterprises should also be improved in terms of physical standards.

Employer Opinions: According to the employers, there are some differences among the graduates, however, these are not caused by the school but due to the individual differences. That is, they said that if someone liked his/her occupation and job, and wanted to work, things would be better, and people would be more successful.

In recruitment, employers give priority to the VTE graduates but they find them incompetent in some respects, such as their hand skills and enthusiasm. According to employers, education, especially vocational education is very important; therefore, schools should be more active to learn about the labor market. They also suggested that schools select more enthusiastic students in order to be successful.

Discussion and Conclusions

Results show that the majority of the graduates interviewed were largely affected by their families in deciding to choose their school and occupational branch. In this decision, it seems that economical reasons are more influential than their ability and interest. Vocational schools are filled with children from the poor socio-economic backgrounds (Psacharopoulos & Patrinos, 1993). This may cause families to have anxiety regarding their children's future. Another reason for this decision is the fact that, in the public sector, workers performing technical jobs get more wages than others do. For example, industrial teachers get approximately 10% more than academic teachers do. Employment in the formal sector is the more conventional goal of those who do not proceed to higher education, and in technical areas this usually means entry to artisan or technician level occupations (Godwin, 1990).

Consequently, whatever the reasons are, it seems that it is too early for young people to decide to a specific job immediately after middle school since it causes some inconsistencies with future career expectations of individuals. In just the same way, Kuzgun (1986) argued that between the ages of 14-18, a young person is generally interested in one or more occupational fields, however, s/he is not expected to decide to train for a specific job yet, and real determination occurs during the ages 18-21. As Grubb (1997) suggested, postponing specific job preparation until the post secondary years will not result in premature vocational decisions. To support this, Psacharopoulos (1991) claimed that the occupational specialization should happen as late as possible in the schooling cycle, preferably out of the main trunk of the educational system, and on the job. Similarly, King (1993) reports that what is driving the reforms also in France and in the United Kingdom is a desire to prevent too early specialization by young people.

This research also revealed that although interviewed graduates found vocational subjects insufficient in quality and quantity, they used most of them if they were employed in the field of their studies. As evidenced, however, almost 60% of the graduates rated their current jobs and studies as unrelated to their secondary school studies. Indeed, many students are in tracks inconsistent with their career choices. Similarly, an important portion of technical and industrial vocational high school graduates hold unskilled positions even if they were employed in related industrial sector. For example, 29.46% of VTE graduates in Istanbul (Erbesler, 1987), and 32.62% of VTE graduates in Ankara (Aksoy, 1995) work as unskilled workers in related industrial sectors. There are also serious complaints about enterprises where the students go for industry practice, so-called work-based education. As Owens (1997) argued, just placing a student at an employer's site does not ensure that learning takes place. It is clear that employing people in the field of their technical education is as important as educating them well.

During the interviews, graduates gave the academic subjects as much importance as they gave to the vocational subjects. But it is interesting to note that they realized the importance of academic subjects after graduation, and having some job experiences in the labor market. If it is the fact that a great majority of the graduates had a desire to attend a university, then, schools should concentrate more on academic subjects. As a matter of fact, it is claimed that a good academic education acts as a base for further learning. As Godwin (1990) asserted, an academic education is more vocationally relevant in its potential for social and economic preparation. Therefore, it is more sound to claim that schools should focus on general knowledge, e.g., reading, writing, mathematics, science, and communication skills (Psacharopoulos, 1991). In

addition, employers are more likely to hire students in their twenties than 18-year-old high school graduate (Grubb, 1997).

According to employers, in choosing a job or profession, individual's interest and ability must be given more priority than any other factor. Therefore, they emphasized the importance of preventing inappropriate choices when individuals choose their vocational branch in entering the school. Similarly, Campbell (1981) stated that special emphasis should be placed on vocational guidance and recruitment activities since a vocational training system cannot be successful unless it attracts and motivates trainees.

Such findings of this research as the low rate of graduates working in their field of education, the high rate of job changes, long period of unemployment, complaints of the graduates about working conditions, and desiring to attend higher education support the existence of such an "inappropriate or premature vocational choice." However, all these findings also indicate that there is an obvious necessity to improve the work place standards in industrial sector. Otherwise, nobody wants to work in poor working conditions unless s/he has to.

Implications

Although this was a case study limited to a vocational-technical school, most of its findings are consistent with both national and international literature. The following implications were drawn for practice and for further research:

Secondary schooling for VTE should be reconsidered, because vocational schools, at least for this case, did not curb the demand for higher education. Most of the graduates have been either working in unrelated jobs or attending a university program unrelated to their previous studies. Therefore, most of the investment has a risk to be wasted. However, this does not mean that academic schools should teach core subjects in an abstract manner. On the contrary, academic courses are increasingly using examples and learning activities that relate to the use of their subjects in business/industry and everyday life. Our suggestion, at this point, is to prevent too early and narrow skill specialization, and to adopt to a broad-based knowledge in schools and skill training on the job and/or post-secondary level as in the "new vocationalism" movement in USA (Grubb, 1997). In addition, the program of studies in high schools should be rearranged to make them give all students the knowledge and skills that may need for future success so that students are not tracked into dead-end programs on the basis of premature career choices. In addition, vocational guidance at the middle and secondary school level should be improved in order to enable students to make their own decisions about the vocational choice.

Some mechanical branches such as Lathe, Furniture and Decoration, and Metal Works are no longer attractive to students. These occupational branches are considered lower status as compared to those related to electronics and computer. In addition, students who graduated from such departments as electronics, and computer, were more likely to find jobs related to their school education. These trends must be considered as indicators for the future planning of VTE. In addition, training institutions should engage in research activities both in the labor market and in the institution itself by giving special emphasis to occupational branches. The results obtained from such studies would be very helpful indicators to measure whether the objectives are achieved. It is also imperative that training institutions take a role in job placement for their graduates, and give special emphasis to vocational guidance in order to attract and motivate trainees.

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APPENDIX A.

Table 4

The Development of Departments and Student Enrollment

SCHOOL	DEPARTMENTS	'85-'86	'86-'87	'87-'88	'88-'89	'89-'90	'90-'91	'91-'92	'92-'93	'93-'94	'94-'95
Industrial Vocational High School	Electricity	205	228	352	489	472	470	499	439	451	444
	Electronics	130	165	203	247	252	291	291	252	271	313
	Metal Works	165	176	181	137	105	109	105	139	155	199
	Furniture & Decoration	88	101	96	72	84	89	124	124	121	135
	Lathe	188	222	316	314	294	271	312	307	284	302
	Pattern	-	-	-	-	-	-	-	-	40	75
Technical High School	Computer	-	-	-	30	56	86	88	88	72	57
	Industrial Electronics	72	93	96	96	101	86	86	86	72	60
	Control & Instrumentation	-	-	-	-	-	-	-	23	35	29
	Micro-technical	46	51	54	62	79	80	66	66	24	11
Anatolian Tech. High S.	Control & Instrumentation	-	-	-	-	-	-	-	-	21	41
	Micro-technical	-	-	-	-	-	-	-	-	22	46
TOTAL		894	1036	1298	1447	1443	1482	1571	1524	1568	1716

APPENDIX B

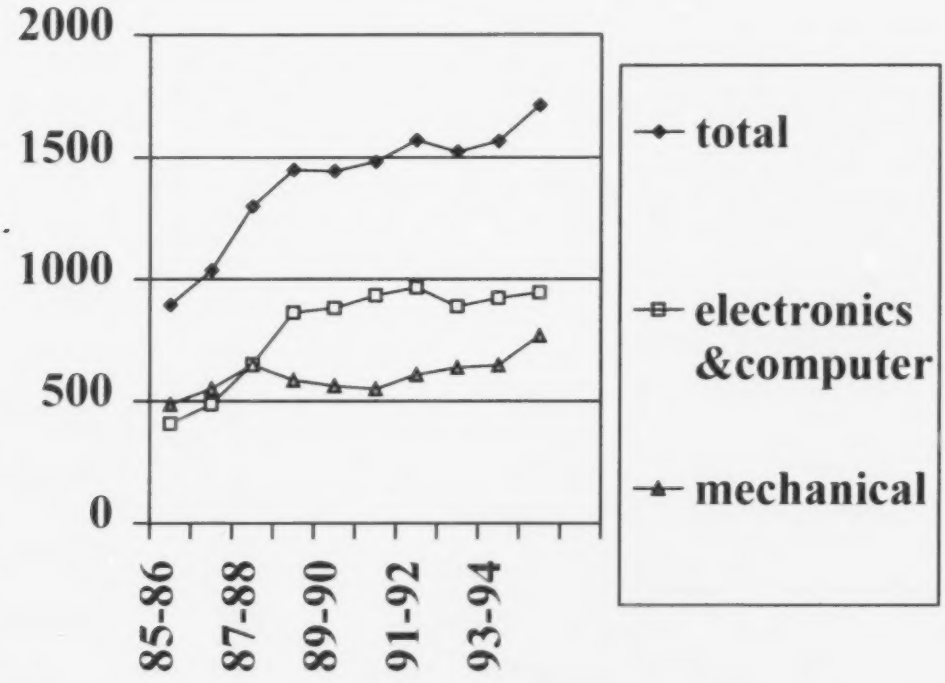

Figure 1. Student enrollment by years and occupational groups

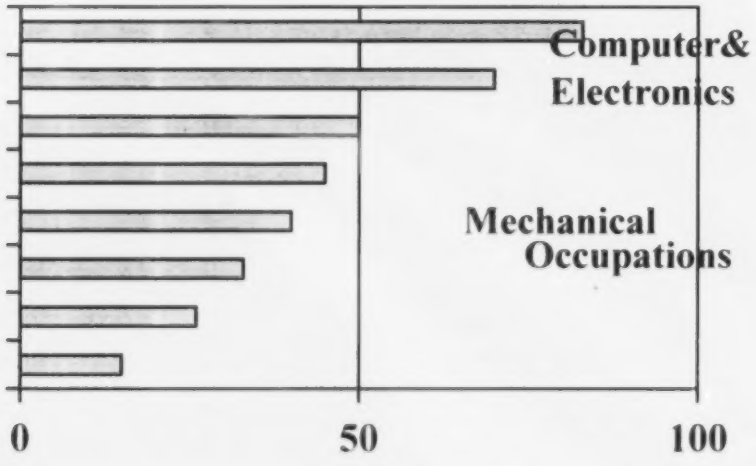

Figure 2. Graduates remaining in their field of study